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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/582,258	11/27/2000	Joachim Melbert	051480-5024	1696

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EXAMINER

LEJA, RONALD W

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/582,258

Applicant(s)

MELBERT ET AL.

Examiner

Ronald W Leja

Art Unit

2836

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other: _____

Art Unit: 2836

1. The Disclosure is objected to because of the following informalities:

The reference to Claim 1 on Page 1 needs to be deleted as the Specification is a guide for the claims and not vise-versa.

The Sections of the Specification need to be labeled, i.e. "Brief Description of the Drawings" and "Detailed Description" etc....

The Specification references the springs as "118a,b" whereas in Figure 1, they appear labeled as "115a,b".

Appropriate correction is required.

2. The Abstract of the Disclosure is objected to because it needs to be in "single paragraph" form. Correction is required. See MPEP § 608.01(b).

3. Claims 5-7 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Are the two recitations of "a preset threshold value", in Claim 5, drawn to the same value or different values? The same problem ("the preset threshold value"; which one?) occurs in Claim 6, as well as for "a preset time delay" (2 occurrences). Claim 7 has the same type of problems. In Claim 10, confusion arises with "through the other coil"; should this more correctly be "through the another coil"?

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2836

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wichert et al. (GB 2,279,829 A) in view of Buchl (4,823,825).

Wichert et al. disclose (see Figure 1) a device for controlling an electromechanical regulator, which has an actuator and an actuating drive with an electromagnet and coil. A controller controls the current through the coil and during operation of the armature, the control signals depend on the current and the time differential of the current through the coil in the free-running operating state (see also Page 8, lines 4-9 and Page 9, lines 7-23). Although Wichert et al. disclose applications involving fuel injection into petrol and/or

Art Unit: 2836

diesel engines, they do not appear to disclose use of "a return mechanism being coupled to the armature or use in a three-position controller where there is a second electromagnet, another coil and return mechanism (for Claims 9 and 10). However, Buchl teaches coil current control in electromechanical valves for petrol and/or diesel engines wherein control signals depend on both current and the time differential of the current. Figure 5 illustrates the use of two coils and return mechanisms/(springs). Figures 3 and 4 illustrate the use of a resistor for current measuring (for Claim 3). It would have been obvious to apply the teachings of Buchl, namely use of return mechanisms within engine valves, so as to be able to easily return the armature to a neutral position and make it ready for the successive operation, without having to return the armature to the neutral position via excitation of an additional coil, thereby saving in energy. The use of the valve illustrated in Figure 5 of Buchl would have been obvious as a means to gain the benefits of current control as disclosed by Wichert et al., for those electromechanical regulators requiring three-position controlling, thereby increasing overall engine performance.

6. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a Statement of Reasons for the Indication of Allowable Subject Matter: The added limitations found in Dependent

Art Unit: 2836

Claim 4, which include "that the control signals depend on the ratio of the time differential of the current and the current through the coil" are not disclosed nor suggested by the Prior Art of Record.

8. Claims 5-7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wright et al. (6,285,151) is cited as a matter of interest and Mitchell (4,907,901) is cited for the use of current and the derivative of the current in measurement taking within an electromechanical system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald W Leja whose telephone number is (703)308-2008. The examiner can normally be reached on mon-fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (703)308-3119. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3675.

Ronald W Leja
Ronald W Leja
Primary Examiner
Art Unit 2836

12/15/02

rwl
December 15, 2002